a not uncommon cause of the intercurrent pulmonary congestion to which they are so subject; and all consumptives who sweat should, therefore, wear a large, loose night-dress made of fine flannel."

26. *Tar in Bronchial Catarrh and Winter Cough.*—Dr. SIDNEY RINGER and Mr. WM. MURRELL state (*Brit. Med. Journ.*, March 20, 1875) that the frequent and popular use of this remedy has induced them to try its effects. "Patients," they say, "so susceptible to cold that they were obliged to remain indoors the whole winter, informed us that this remedy curtailed considerably the duration and lessened the severity of their catarrhal attacks, and that, by an occasional recourse to the tar, they became less prone to catch cold, and could more freely expose themselves to the weather without incurring an attack.

"We employed it in two-grain doses, made into a pill, every three or four hours. From October to January inclusive, we carefully watched its effects on twenty-five patients whose ages varied from 34 to 70, the average being 44. All these patients had suffered for several years from winter-cough, lasting the whole winter. They were out-patients, and visited the hospital weekly, or oftener. Most of them were much exposed to the weather, whilst some were so ill that they were obliged to stop work, and, therefore, were less exposed.

"These patients suffered from the symptoms common in winter-cough—paroxysmal and violent cough, the paroxysms lasting from two to ten minutes, and recurring ten to twelve times a day, and, in the night, breaking their rest. The expectoration, frothy and slightly purulent, was generally rather abundant, amounting in some cases to half a pint or more in the day. The breathing was very short on exertion, but most could lie down at night without propping. The physical signs showed a variable amount of emphysema, with sonorous and sibillant rhonchus, and occasionally a little bubbling rhonchus at the base.

"These patients usually begin to improve from the fourth to the seventh day; the improvement rapidly increased, and, in about three weeks, they were well enough to be discharged. The improvement was so decided that the patients returned to their work, even those who in previous years had been confined to the house the whole winter. The cough and expectoration improved before the breathing. In several cases the expectoration increased during the first three or four days, but its expulsion became easier, and, with the improvement in the cough and expectoration, appetite and strength returned.

"On discontinuing the tar a relapse often occurred in a week or two, and the patient returned with a request for more of the same medicine, and then, a second time, the symptoms quickly subsided. We found it useless in bronchial asthma, and its effects were more evident in cases where expectoration and cough were more marked than dyspnœa.

"We have no doubt that tar is a good, useful, though, perhaps, not a striking, remedy in these troublesome affections, and certainly it is more efficacious than the drugs generally employed.

"It may be remarked that tar is useful in the same cases for which the spray of ipecacuanha wine is serviceable. The spray, we find, acts much more quickly, and, unlike tar, it lessens dyspnœa even before it improves cough or diminishes expectoration."

27. *Transfusion.*—Dr. C. A. EWALD writes to the *Irish Hospital Gazette* (May 15, 1875), that in Berlin the operation of transfusion "has lately become very general, which is due in a great measure to the interest excited by the publications of Dr. Hasse, of Nordhausen. Once the symptoms point to the necessity for the artificial supply of fresh blood, the only questions to be determined are, first, must the blood used be taken from an animal belonging to the same species or not; and further, whether the blood injected should be defibrinated or not? This latter question is to some extent settled; for we know that the fibrin is unnecessary for the purpose of improving degenerated blood, and, therefore, that defibrinated or undefibrinated blood is equally efficacious. For it is an established fact that the red blood corpuscles are not in any way injured by the process of defibrination; and we know that the process

of oxidation, and through it, probably, all the chief effects that we expect from the blood transfused, is carried on by means of the red corpuscles. Therefore, until it can be shown that defibrinated blood is wanting in some necessary and important constituent, or that defibrination predisposes to some special accident, so long does there seem to me to be no ground for discarding a method which has the great advantage of being so quickly and readily carried ont. I would myself, therefore, always use defibrinated blood in preference to undefibrinated; for the former can at all events do no harm, while the advantages of the latter are, to say the least, questionable, and it may under certain circumstances prove eminently injurious, from the coagulation of the fibrin and the formation of thrombi or emboli.

"The question as to the practicability of using the blood of an animal belonging to a different species, has lately been to some extent determined by Landois (*Centralblatt*, 1874, No. 27) and Ponfick (*Virchow's Archiv*, vol. 62), who have shown that the moment the amount of such blood exceeds a small and fixed quantity, unfavourable symptoms will under all circumstances develop themselves. Ponfick discovered the presence of free hæmoglobin in the blood plasma in these cases, and as a natural consequence in the various organs and their secretions. He draws attention to the anomalous presence of this substance which is never found in normal blood, in the blood plasma, and, considering that the function of the kidneys is to get rid of such a substance, he concludes that the deleterious effects of such transfusions are caused by the inability of these organs to perform the extra work thus imposed upon them. That the kidneys are hereby seriously inflamed is proved, by finding after death a copious exudation of plasma into the lumina of the uriniferous tubules, which at once causes an insufficient amount of urine to be secreted. Death takes place, just as it does in cases of uræmia, from suppression of urine, the symptoms being in both cases similar. The success which Dr. Hasse, who always transfuses lamb's blood, professes to have obtained is not above question, and the results obtained by other operators, as for instance Birsch-Hirschfeld and Ries, have not come up to the expectations which a perusal of Dr. Hasse's publications is calculated to awaken. In three cases in which I have lately been called upon to perform the operation, I used defibrinated human blood. The ordinary operation was performed twice for excessive anæmia (Pseudo-leukæmia) and once in a case of poisoning with carbonic oxide. In one of the cases of anæmia and in the case of poisoning with carbonic oxide, the operation was quickly followed by the patient's recovery. The other case of anæmia, which occurred in a young man aged 27, proved fatal five hours after the operation, with all the symptoms which usually accompany death after the transfusion of animal blood. None of the patients complained during the operation either of violent stitch or pain in the back, which is a constant symptom when animal blood is used. In all three the temperature rose during the two hours following the operation to 104°–104°.9 Fahr., and then sank quickly to normal. There were no further symptoms. The blood transfused was on each occasion obtained from patients who were suffering from some slight bronchial affection. Immediately after the operation, the patient who as above mentioned afterwards died, felt quite well, and, like the other two, his pulse was stronger and fuller than it had been previously, and his breathing, which had been somewhat hurried before the operation, became quieter. During the third hour after the operation he began to complain of want of breath and became very restless, tossing himself about in bed, and died quite suddenly without presenting any very special symptoms.

"The urine that was found in the bladder was the colour of blood, and contained some cylinder-shaped bodies which were composed of a finely granular, yellowish-red mass, which contained, however, no red blood corpuscles, but on which the usual hæmoglobin markings were plainly visible.

"At the *post mortem*, the heart was found slightly hypertrophied and fatty. The spleen was slightly enlarged; there was extravasation of blood beneath the serous membranes, especially the pericardium and pleura. Neither macroscopically nor microscopically could any alteration be detected in the vessels. The kidneys were large and unusally pale. Under the microscope the epithelium of the straight tubes appeared dull. Here and there at the junction of the straight and convoluted tubes, broad cylindrical bodies were found which correspond exactly with those in the urine. All this agrees accurately with the *post-mortem* appearances described by Ponfick and Landois as occurring in cases that proved fatal after the transfusion of animal blood. I have not quite made up my mind as to what were the conditions in this case that led to the fatal termination. It seems, indeed, probable that there was, if I may be allowed to use the expression, a sort of morbid predisposition of the whole circulating system and its contents. From the state of fatty degeneration in which the heart was found, it is plain that there must have been some interference with the nutrition of the vessels, and a considerable change in the constitution of the blood. Now, why should not blood whose chemical and morphological elements have undergone such a change bear the same contrast with healthy blood, as it has been found by experiment that lamb's blood does with dog's blood? It will be very hard to determine in successful cases what influence the transfusion has had, or if indeed it has had any. But the operation itself is so simple, and its good effect so notorious, that it certainly deserves to be performed oftener than it is. In the case of leukæmia that I transfused successfully, the operation had a marked influence on the constitution of the blood. For a drop of blood obtained before the operation by pricking the finger, appeared of light blood-red colour and watery; while a drop obtained in a similar manner after the operation had a florid red colour, and seemed thicker. Both before and after the operation the red blood corpuscles presented a peculiar pale and glistening appearance, and their number was not perceptibly increased by the operation. I may further remark that eight cases in the Augusta Hospital, in which Dr. Kuster lately performed transfusion with lamb's blood, all turned out unsuccessful. These eight cases all died, and in none of them was the good effect of the operation perceptible for more than from ten to fourteen days. In one case the operation was probably the immediate cause of an attack of hæmoptysis, and in another it was followed by protracted fever. All the patients complained during the operation of violent pain in the back and great difficulty in breathing. From half an hour to an hour after the operation they were seized with a rigor, followed by a rise in temperature, which was again dissipated in from five to six hours. It is only fair to mention that all these patients were suffering at the time of the operation from some severe surgical injury."

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28. *Nervous Headache and its Treatment.*—M. HERVEZ DE CHÉGOIN, in the *Union Médicale* for October, 1874, after having verified the dilatation of the arterial vessels of the encephalon and the face during attacks of nervous headache, considers it as an arterial neurosis. Its starting-point is in the great sympathetic, its precise seat in the nervous filaments which accompany the arteries. Its material phenomena are seen in the dilatation of these vessels, and in the compression it produces on the brain and the other organs; for, in a true fit of intense nervous headache, patients suffer universally, the hands are swollen, the muscles painful, and movements of the joints distressing.

M. Hervez de Chégoin concludes from these facts that the treatment should be directed against the distress of the nervous system of the great sympathetic, and against the resulting arterial dilatation which in his view constitutes the essential characteristic of the disorder, in which it is necessary to distinguish three things, the intermittent character, the pain, and the arterial dilatation. A special therapeutic treatment, founded on the rigorous appreciation of and reasoned out from these elements of the disease, leads to the good results which have been obtained by the administration of pills composed as follows:—

Sulphate of quinia, tannin, each 5 centigrammes (0.75 grain), aconitia 1 milligramme (0.015 grain) for one pill. One of these pills is given during the day; but some patients, having of their own accord exceeded this dose, take as many as three or four of them daily, with marked benefit. Tannin, in particular, seems to have a special action, which explains the relief obtained by the use of certain substances, which, like Paullinia, contain it. This treatment, however, is incomplete, since it does not touch the intermittence nor the pain;